FIG. 1A

```
Mouse Microutro     1 ATGGCCAAGTATGGGGACCTTGAAGCCAGGCCTGATGATGGGCAGAACGA   50
Human Microutro     1 ATGGCCAAGTATGGAGAACATGAAGCCAGTCCTGACAATGGGCAGAACGA   50
Canine Microutr     1 ATGGCCAAGTATGGAGAACATGAAGCCAGTCCTGATAATGGGCAGAACGA   50
                      ************** ** * ********* *****  *************

Mouse Microutro    51 ATTCAGTGACATCATTAAGTCCAGATCTGATGAACACAATGATGTACAGA  100
Human Microutro    51 ATTCAGTGATATCATTAAGTCCAGATCTGATGAACACAATGACGTACAGA  100
Canine Microutr    51 ATTCAGTGACATCATTAAGTCCAGATCTGATGAACACAATGACGTGCAGA  100
                      ********* ********************************** ** ****

Mouse Microutro   101 AGAAAACCTTTACCAAATGGATAAACGCTCGATTTTCCAAGAGTGGGAAA  150
Human Microutro   101 AGAAAACCTTTACCAAATGGATAAATGCTCGATTTTCAAAGAGTGGGAAA  150
Canine Microutr   101 AGAAAACCTTTACCAAATGGATCAATGCGCGATTTTCAAAGAGTGGAAAA  150
                      ********************** ** ** ******** ******** ***

Mouse Microutro   151 CCACCCATCAGTGATATGTTCTCAGACCTCAAAGATGGGAGAAAGCTCTT  200
Human Microutro   151 CCACCCATCAATGATATGTTCACAGACCTCAAAGATGGAAGGAAGCTATT  200
Canine Microutr   151 CCACCCATCAATGATATGTTCACAGACCTCAAAGATGGAAGGAAGCTCCT  200
                      ********** ********** *************** ** *****  *

Mouse Microutro   201 GGATCTTCTCGAAGGCCTCACAGGAACATCATTGCCAAAGGAACGTGGTT  250
Human Microutro   201 GGATCTTCTAGAAGGCCTCACAGGAACATCACTGCCAAAGGAACGTGGTT  250
Canine Microutr   201 GGATCTTCTGGAAGGCCTCACAGGAACATCACTGCCAAAGGAACGTGGTT  250
                      ********* ********************** ******************
```

FIG. 1B

```
Mouse Microutro  251 CCACAAGGGTGCATGCCTTAAACAATGTCAACCGAGTGCTACAGGTTTTA  300
Human Microutro  251 CCACAAGGGTACATGCCTTAAATAACGTCAACAGAGTGCTGCAGGTTTTA  300
Canine Microutr  251 CCACAAGGGTACATGCTTTAAATAATGTCAACAGAGTGCTGCAGGTTTTG  300
                     ********** ***** ***** ** ****** ******* ********

Mouse Microutro  301 CATCAGAACAATGTGGACTTGGTGAATATTGGAGGCACGGACATTGTGGC  350
Human Microutro  301 CATCAGAACAATGTGGAATTAGTGAATATAGGGGGAACTGACATTGTGGA  350
Canine Microutr  301 CATCAGAATAATGTGGATTTAGTGAATATAGGAGGAACTGACATTGTAGA  350
                     ******** ******** ** ******** ** ** ** ******** *

Mouse Microutro  351 TGGAAATCCCAAGCTGACTTTAGGGTTACTCTGGAGCATCATTCTGCACT  400
Human Microutro  351 TGGAAATCACAAACTGACTTTGGGGTTACTTTGGAGCATCATTTTGCACT  400
Canine Microutr  351 TGGAAATCACAAACTGACTTTGGGATTACTTTGGAGCATCATTTTGCACT  400
                     ******** *** ******** ** ***** ************ ******

Mouse Microutro  401 GGCAGGTGAAGGATGTCATGAAAGATATCATGTCAGACCTGCAGCAGACA  450
Human Microutro  401 GGCAGGTGAAAGATGTCATGAAGGATGTCATGTCGGACCTGCAGCAGACG  450
Canine Microutr  401 GGCAGGTAAAAGATGTCATGAAAGATGTCATGTCAGACCTGCAGCAGACA  450
                     ******* ** ********** *** ******* **************

Mouse Microutro  451 AACAGCGAGAAGATCCTGCTGAGCTGGGTGCGGCAGACCACCAGGCCCTA  500
Human Microutro  451 AACAGTGAGAAGATCCTGCTCAGCTGGGTGCGTCAGACCACCAGGCCCTA  500
Canine Microutr  451 AACAGTGAGAAGATCCTACTGAGCTGGGTGCGCCAGTCTACTAGGCCGTA  500
                     ***** ********** ** ********** *** * ** ***** **
```

FIG. 1C

```
Mouse Microutro  501 CAGTCAAGTCAACGTCCTCAACTTCACCACCAGCTGGACCGATGGACTCG  550
Human Microutro  501 CAGCCAAGTCAACGTCCTCAACTTCACCACCAGCTGGACAGATGGACTCG  550
Canine Microutr  501 CAGCCAGGTCAACGTCCTCAACTTCACCACCAGCTGGACAGATGGACTGG  550
                     *** ** ********************************** ******** *

Mouse Microutro  551 CGTTCAACGCCGTGCTCCACCGGCACAAACCAGATCTCTTCGACTGGGAC  600
Human Microutro  551 CCTTTAATGCTGTCCTCCACCGACATAAACCTGATCTCTTCAGCTGGGAT  600
Canine Microutr  551 CCTTTAATGCTGTGCTGCACCGACATAAACCTGATCTCTTCAGCTGGGAT  600
                     * ** ** ** ** ** ***** ** ***** ********* ******

Mouse Microutro  601 GAGATGGTCAAAATGTCCCCAATTGAGAGACTTGACCATGCTTTTGACAA  650
Human Microutro  601 AAAGTTGTCAAAATGTCACCAATTGAGAGACTTGAACATGCCTTCAGCAA  650
Canine Microutr  601 AGAGTTGTCAAAATGTCCCCAATTGAGAGACTTGAACATGCCTTCAGCAA  650
                         * *********** ***************** ***** **   ***

Mouse Microutro  651 GGCCCACACTTCTTTGGGAATTGAAAAGCTCCTAAGTCCTGAAACTGTTG  700
Human Microutro  651 GGCTCAAACTTATTTGGGAATTGAAAAGCTGTTAGATCCTGAAGATGTTG  700
Canine Microutr  651 AGCTCAAACTTATTTGGGAATTGAAAAGCTGTTAGATCCTGAAGATGTTG  700
                      ** ** **** ******************  **  *******  *****

Mouse Microutro  701 CTGTGCATCTCCCTGACAAGAAATCCATAATTATGTATTTAACGTCTCTG  750
Human Microutro  701 CCGTTCGGCTTCCTGACAAGAAATCCATAATTATGTATTTAACATCTTTG  750
Canine Microutr  701 CCGTTCAACTTCCTGACAAGAAATCCATAATTATGTATTTAACATCTTTG  750
                     * ** *  ** ********************************* *** **
```

FIG. 1D

```
Mouse Microutro  751 TTTGAGGTGCTTCCTCAGCAAGTCACGATAGATGCCATCCGAGAGGTGGA  800
Human Microutro  751 TTTGAGGTGCTACCTCAGCAAGTCACCATAGACGCCATCCGTGAGGTAGA  800
Canine Microutr  751 TTTGAGGTGCTTCCTCAGCAAGTCACTCTAGATGCCATCCGTGAAGTAGA  800
                     *********** **********  **** ******** ** ** **

Mouse Microutro  801 GACTCTCCCAAGGAAGTATAAGAAAGAATGTGAAGAGGAAGAAATTCATA  850
Human Microutro  801 GACACTCCCAAGGAAATATAAAAAAGAATGTGAAGAAGAGGCAATTAATA  850
Canine Microutr  801 GACACTCCCAAGGAAATATAAGAAAGAATGTGAAGAAGGAGAGATTAGTA  850
                     *** *********** ***** ************** *  *  ***  **

Mouse Microutro  851 TCCAGAGTGCAGTGCTGGCAGAGGAAGGCCAGAGTCCCCGAGCTGAGACC  900
Human Microutro  851 TACAGAGTACAGCGCCTGAGGAGGAGCATGAGAGTCCCCGAGCTGAAACT  900
Canine Microutr  851 TACAGAGCTCAGCGCCAGAGGAGGAGCATGAGTGTCCCGGAGCTGAAACC  900
                     * *****  *** **  *  *****     ** ***** ******* **

Mouse Microutro  901 CCTAGCACCGTCACTGAAGTGGACATGGATTTGGACAGCTACCAGATAGC  950
Human Microutro  901 CCCAGCACTGTCACTGAGGTCGACATGGATCTGGACAGCTATCAGATTGC  950
Canine Microutr  901 CCCAGCACTGTCACTGAAGTTGACACGGATCTGGACAGCTATCAGATAGC  950
                     ** ***** ******** ** **** **** ********** ***** **

Mouse Microutro  951 GCTAGAGGAAGTGCTGACGTGGCTGCTGTCCGCGGAGGACACGTTCCAGG 1000
Human Microutro  951 GTTGGAGGAAGTGCTGACCTGGTTGCTTTCTGCTGAGGACACTTTCCAGG 1000
Canine Microutr  951 ACTGGAGGAAGTGCTGACCTGGTTGCTTTCTGCCGAGGACACTTTCCAGG 1000
                       * ************** *** **** ** ** ******** *******
```

FIG. 1E

```
Mouse Microutro 1001 AGCAACATGACATTTCTGATGATGTCGAAGAAGTCAAAGAGCAGTTTGCT 1050
Human Microutro 1001 AGCAGGATGATATTTCTGATGATGTTGAAGAAGTCAAAGACCAGTTTGCA 1050
Canine Microutr 1001 AGCAGGATGACATTTCTGATGATGTAGAAGAAGTCAAAGAGCAGTTTACT 1050
                     ****  **** ************** ************** ****** *

Mouse Microutro 1051 ACCCATGAAACTTTTATGATGGAGCTGACAGCACACCAGAGCAGCGTGGG 1100
Human Microutro 1051 ACCCATGAAGCTTTTATGATGGAACTGACTGCACACCAGAGCAGTGTGGG 1100
Canine Microutr 1051 ACCCATGAAGCTTTTATGATGGAGCTGACAGCGCACCAGAGCAGTGTGGG 1100
                     ********* ************* ***** ** ********** *****

Mouse Microutro 1101 GAGCGTCCTGCAGGCTGGCAACCAGCTGATGACACAAGGGACTCTGTCCA 1150
Human Microutro 1101 CAGCGTCCTGCAGGCAGGCAACCAACTGATAACACAAGGAACTCTGTCAG 1150
Canine Microutr 1101 CAGTGTCCTGCAGGCAGGAAACCAGCTGATAACGCAAGGAACTCTGTCAG 1150
                      ** ************ ** ***** ***** ** ***** ********

Mouse Microutro 1151 GAGAGGAGGAGTTTGAGATCCAGGAACAGATGACCTTGCTGAATGCAAGG 1200
Human Microutro 1151 ACGAAGAAGAATTTGAGATTCAGGAACAGATGACCCTGCTGAATGCTAGA 1200
Canine Microutr 1151 ATGAGGAGGAATTTGAAATTCAGGAACAAATGACCCTGCTAAATGCTAGA 1200
                       ** ** ** ***** ** ******** ****** **** ***** **

Mouse Microutro 1201 TGGGAGGCGCTCCGGGTGGAGAGCATGGAGAGGCAGTCCCGGCTGCACGA 1250
Human Microutro 1201 TGGGAGGCTCTTAGGGTGGAGAGTATGGACAGACAGTCCCGGCTGCACGA 1250
Canine Microutr 1201 TGGGAGGCACTCAGGGTGGATAGTATGAACAGACAGTCCCGGCTGCATGA 1250
                     ******** **  ******* ** *** * ** ************** **
```

FIG. 1F

```
Mouse Microutro 1251 CGCTCTGATGGAGCTGCAGAAGAAACAGCTGCAGCAGCTCTCAAGCTGGC 1300
Human Microutro 1251 TGTGCTGATGGAACTGCAGAAGAAGCAACTGCAGCAGCTCTCCGCCTGGT 1300
Canine Microutr 1251 TGTGTTGATGGAACTACAAAAGAAGCAGTTGCAACAGCTCTCTGCCTGGT 1300
                      *   ******* ** ** ***** **  **** ********   ****

Mouse Microutro 1301 TGGCCCTCACAGAAGAGCGCATTCAGAAGATGGAGAGCCTCCCGCTGGGT 1350
Human Microutro 1301 TAACACTCACAGAGGAGCGCATTCAGAAGATGGAAACTTGCCCCCTGGAT 1350
Canine Microutr 1301 TAACACTCACAGAAGAACGCATTCAGAAGATGGAAACCTGCCCCCTGGAT 1350
                     *  * ******** ** ***************** *    *** **** *

Mouse Microutro 1351 GATGACCTGCCCTCCCTGCAGAAGCTGCTTCAAGAACATAAAAGTTTGCA 1400
Human Microutro 1351 GATGATGTAAAATCTCTACAAAAGCTGCTAGAAGAACATAAAAGTTTGCA 1400
Canine Microutr 1351 GATGATTTAAAATCCCTACAAAAGCTACTAGAAGATCATAAACGTTTGCA 1400
                     *****  *    ** ** ** ***** **  **** ****** *******

Mouse Microutro 1401 AAATGACCTTGAAGCTGAACAGGTGAAGGTAAATTCCTTAACTCACATGG 1450
Human Microutro 1401 AAGTGATCTTGAGGCTGAACAGGTGAAAGTAAATTCACTAACTCACATGG 1450
Canine Microutr 1401 AAATGATCTTGAGGCGGAACAGGTGAAGGTAAATTCACTAACACACATGG 1450
                     ** *** ***** ** ********** ********  **** *******

Mouse Microutro 1451 TGGTGATTGTGGATGAAAACAGTGGGGAGAGTGCCACAGCTCTTCTGGAA 1500
Human Microutro 1451 TGGTCATTGTTGATGAAAACAGTGGTGAGAGCGCTACAGCTATCCTAGAA 1500
Canine Microutr 1451 TGGTGATTGTTGATGAAAACAGTGGTGAGAGTGCCACTGCTGTTCTGGAA 1500
                     **** ***** ************** ***** ** ** *** * ** ***
```

FIG. 1G

```
Mouse Microutro 1501 GATCAGTTACAGAAACTGGGTGAGCGCTGGACAGCTGTATGCCGCTGGAC 1550
Human Microutro 1501 GACCAGTTACAGAAACTTGGTGAGCGCTGGACAGCAGTATGCCGTTGGAC 1550
Canine Microutr 1501 GATCAGTTACAGAAACTTGGTGAACGCTGGACAGCAGTGTGCCGTTGGAC 1550
                     ** ************** ***** ********** ** ***** *****

Mouse Microutro 1551 TGAAGAACGTTGGAACAGGTTGCAAGAAATCAGTATTCTGTGGCAGGAAT 1600
Human Microutro 1551 TGAAGAACGCTGGAATAGGTTACAAGAAATCAATATATTGTGGCAGGAAT 1600
Canine Microutr 1551 AGAGGAACGTTGGAGTAGGCTACAAGAAATTAATATATTGTGGCAGGAAT 1600
                      ** ***** ****  *** * ******** * ***  ************

Mouse Microutro 1601 TATTGGAAGAGCAGTGTCTGTTGGAGGCTTGGCTCACCGAAAAGGAAGAG 1650
Human Microutro 1601 TATTGGAAGAACAGTGCTTGTTGAAAGCTTGGTTAACCGAAAAAGAAGAG 1650
Canine Microutr 1601 TATTAGAAGAACAGTGCTTGTTGAAAGCTTGGCTAACTGAAAAAGAAGAG 1650
                     **** ***** *****  ***** * ****** * ** ***** ******

Mouse Microutro 1651 GCTTTGGATAAAGTTCAAACCAGCAACTTTAAAGACCAGAAGGAACTAAG 1700
Human Microutro 1651 GCTTTAAATAAAGTCCAGACAAGCAACTTCAAAGACCAAAAGGAACTAAG 1700
Canine Microutr 1651 GCCTTAAATAAAGTCCAGACGAGCAACTTCAAAGACCAAAAGGAACTAAG 1700
                     ** **  ******* ** ** ******** ******** **********

Mouse Microutro 1701 TGTCAGTGTCCGGCGTCTGGCTATATTGAAGGAAGACATGGAAATGAAGA 1750
Human Microutro 1701 TGTCAGTGTTCGACGTCTGGCTATTTTGAAGGAAGACATGGAAATGAAGC 1750
Canine Microutr 1701 TGTCAGCATCCGACGATTGGCTATTTTGAAGGAAGACATGGAAATGAAAC 1750
                     ******  * ** **  ******* **************************
```

FIG. 1H

```
Mouse Microutro 1751 GGCAGACTCTGGATCAACTGAGTGAGATTGGCCAGGATGTGGGCCAATTA 1800
Human Microutro 1751 GTCAAACATTGGATCAGCTGAGTGAGATTGGCCAGGATGTGGGACAATTA 1800
Canine Microutr 1751 GTCAGGCATTGGATCAGCTGAGTGAGATTGGCCAGGATGTGGGCCAATTA 1800
                     * ** . *  ******* ************************** ******

Mouse Microutro 1801 CTCAGTAATCCCAAGGCATCTAAGAAGATGAACAGTGACTCTGAGGAGCT 1850
Human Microutro 1801 CTTGATAATTCCAAGGCATCTAAGAAGATCAACAGTGACTCAGAGGAACT 1850
Canine Microutr 1801 GTTGATAATCCCAAGGCATCTAAGAAGATCAACAGTGACTCAGAGGAACT 1850
                      *   **** ******************** *********** ***** **

Mouse Microutro 1851 AACACAGAGATGGGATTCTCTGGTTCAGAGACTCGAAGACTCTTCTAACC 1900
Human Microutro 1851 GACTCAAAGATGGGATTCTTTGGTTCAGAGACTAGAAGATTCCTCCAACC 1900
Canine Microutr 1851 AACTCAGAGATGGGATTCTTTGGTTCAGAGACTAGAAGATTCCTCTAGCC 1900
                      ** ** ************ ************ ***** ** ** * **

Mouse Microutro 1901 AGGTGACTCAGGCGGTAGCGAAGCTCGGCATGTCCCAGATTCCACAGAAG 1950
Human Microutro 1901 AGGTGACTCAGGCTGTAGCAAAGCTGGGGATGTCTCAGATTCCTCAGAAG 1950
Canine Microutr 1901 AGGTGACTCAGGCTGTGGCAAAGCTGGGGATGTCCCAAATTCCTCAGAAA 1950
                     ************* ** ** ***** ** ***** ** ***** *****

Mouse Microutro 1951 GACCTATTGGAGACCGTTCATGTGAGAGAACAAGGGATGGTGAAGAAGCC 2000
Human Microutro 1951 GACCTTTTGGAGACTGTTCGTGTAAGAGAACAAGCAATTACAAAAAAATC 2000
Canine Microutr 1951 GATCTTCTGGAGACTGTTCGCATAAGAGAACAAGTAACTACAAAAAGGTC 2000
                     ** **  ******* ****   * **********  *     ** *   *
```

FIG. 1I

```
Mouse Microutro 2001 CAAGCAGGAACTGCCTCCTCCTCCCCCACCAAAGAAGAGACAGATTCACG 2050
Human Microutro 2001 TAAGCAGGAACTGCCTCCTCCTCCTCCCCCAAAGAAGAGACAGATCCATG 2050
Canine Microutr 2001 TAAGCAAGAACTGCCTCCTCCTCCTCCCCCAAAGAAGAGACAGATTCCTG 2050
                     ***** ***************** ** ***************** *  *

Mouse Microutro 2051 TGGACTTAGAGAAACTCCGAGACCTGCAGGGAGCTATGGACGACCTGGAC 2100
Human Microutro 2051 TGGATTTGGAGAAACTCAGAGACCTGCAGGGAGCTATGGATGACCTGGAC 2100
Canine Microutr 2051 TGGATCTGGAGAAGCTCAGAGACCTGCAGGGAGCCATGGATGACCTGGAT 2100
                     ****  * ***** *** ***************** ***** ********

Mouse Microutro 2101 GCAGACATGAAGGAGGTGGAGGCTGTGCGGAATGGCTGGAAGCCCGTGGG 2150
Human Microutro 2101 GCTGACATGAAGGAGGCAGAGTCCGTGCGGAATGGCTGGAAGCCCGTGGG 2150
Canine Microutr 2101 GTTGACATGAAGGAGGCGGAGGCTGTGAGGAATGGCTGGAAGCCTGTGGG 2150
                     *  *************  *** * *** ***************** *****

Mouse Microutro 2151 AGACCTGCTTATAGACTCCCTGCAGGATCACATCGAGAAAACCCTGGCGT 2200
Human Microutro 2151 AGACTTACTCATTGACTCGCTGCAGGATCACATTGAAAAAATCATGGCAT 2200
Canine Microutr 2151 AGACTTACTTATCGACTCACTGCAGGATCACATTGAAAAAACCATGGCAT 2200
                     **** * ** ** ***** ************** ** **** * **** *

Mouse Microutro 2201 TTAGAGAAGAAATTGCACCAATCAACTTAAAAGTAAAAACAATGAATGAC 2250
Human Microutro 2201 TTAGAGAAGAAATTGCACCAATCAACTTTAAAGTTAAAACGGTGAATGAT 2250
Canine Microutr 2201 TTAGAGAAGAAATTGCACCAATCAACCTAAAAGTTAAAACAGTGAATGAT 2250
                     ************************** * ***** *****  *******
```

FIG. 1J

```
Mouse Microutro 2251 CTGTCCAGTCAGCTGTCTCCACTTGACTTGCATCCATCTCTAAAGATGTC 2300
Human Microutro 2251 TTATCCAGTCAGCTGTCTCCACTTGACCTGCATCCCTCTCTAAAGATGTC 2300
Canine Microutr 2251 TTATCCAGTCAGCTGTCTCCACTTGACCTGCATCCATCTCTAAAGATGTC 2300
                      * ********************** ******* **************

Mouse Microutro 2301 TCGCCAGCTGGATGACCTTAATATGCGATGGAAACTTCTACAGGTTTCCG 2350
Human Microutro 2301 TCGCCAGCTAGATGACCTTAATATGCGATGGAAACTTTTACAGGTTTCTG 2350
Canine Microutr 2301 TCGCCAGCTAGATGACCTTAATATGCGATGGAAACTTCTGCAGGTTTCTG 2350
                     ********* ***************************** * ******** *

Mouse Microutro 2351 TGGACGATCGCCTTAAGCAGCTCCAGGAAGCCCACAGAGATTTTGGGCCA 2400
Human Microutro 2351 TGGATGATCGCCTTAAACAGCTTCAGGAAGCCCACAGAGATTTTGGACCA 2400
Canine Microutr 2351 TGGATGATCGCCTTAAACAGCTTCAGGAAGCCCATAGAGATTTTGGGCCA 2400
                     **** *********** ***** *********** *********** ***

Mouse Microutro 2401 TCTTCTCAACACTTTCTGTCCACTTCAGTCCAGCTGCCGTGGCAGAGATC 2450
Human Microutro 2401 TCCTCTCAGCATTTTCTCTCTACGTCAGTCCAGCTGCCGTGGCAAAGATC 2450
Canine Microutr 2401 TCCTCTCAGCATTTTCTTTCTACTTCAGTCCAGCTGCCATGGCAAAGATC 2450
                     ** ***** ** ***** ** ** ************** ***** *****

Mouse Microutro 2451 CATTTCACATAATAAAGTGCCCTATTACATCAACCATCAAACACAGACAA 2500
Human Microutro 2451 CATTTCACATAATAAAGTGCCCTATTACATCAACCATCAAACACAGACCA 2500
Canine Microutr 2451 CATTTCACATAATAAAGTGCCCTATTACATCAACCATCAAACACAGACAA 2500
                     ************************************************ *
```

FIG. 1K

```
Mouse Microutro 2501 CCTGTTGGGATCATCCTAAAATGACTGAGCTCTTCCAATCCCTTGCTGAT 2550
Human Microutro 2501 CCTGTTGGGACCATCCTAAAATGACCGAACTCTTTCAATCCCTTGCTGAC 2550
Canine Microutr 2501 CTTGTTGGGACCGTCCTAAAATGACTGAACTCTTTCAATCTCTTGCTGAC 2550
                     * ******** * ************ ** ***** ***** ********

Mouse Microutro 2551 CTGAATAATGTACGTTTCTCTGCCTACCGCACAGCAATCAAAATTCGAAG 2600
Human Microutro 2551 CTGAATAATGTACGTTTTTCTGCCTACCGTACAGCAATCAAAATCCGAAG 2600
Canine Microutr 2551 CTGAATAATGTACGTTTCTCTGCCTACCGTACAGCCATCAAAATCCGAAG 2600
                     ***************** ********** ***** ******** *****

Mouse Microutro 2601 GCTGCAAAAAGCATTATGTCTGGATCTCTTAGAGCTGAATACGACGAATG 2650
Human Microutro 2601 ACTACAAAAAGCACTATGTTTGGATCTCTTAGAGTTGAGTACAACAAATG 2650
Canine Microutr 2601 ACTACAAAAAGCACTGTGTTTGGATCTCTTAGAGTTGAATACAACAAATG 2650
                      ** ********* * *** ************** *** *** ** ****

Mouse Microutro 2651 AAGTTTTCAAGCAGCACAAACTGAACCAAAATGATCAGCTCCTGAGTGTC 2700
Human Microutro 2651 AAATTTTCAAACAGCACAAGTTGAACCAAAATGACCAGCTCCTCAGTGTT 2700
Canine Microutr 2651 AAGTTTTCAAGCAGCACAAACTGAACCAAAATGATCAGCTTCTTAGCGTT 2700
                     ** ******* ********  ************* ***** ** ** **

Mouse Microutro 2701 CCAGACGTCATCAACTGTCTGACCACCACTTACGATGGGCTTGAGCAGCT 2750
Human Microutro 2701 CCAGATGTCATCAACTGTCTGACAACAACTTATGATGGACTTGAGCAAAT 2750
Canine Microutr 2701 CCAGATGTCATCAACTGTCTGACAACAACTTATGATGGTCTTGAACAAAT 2750
                     ***** ***************** ** ***** ***** ***** **  *
```

FIG. 1L

```
Mouse Microutro 2751 GCACAAGGACTTGGTCAATGTTCCACTCTGCGTCGATATGTGTCTCAACT 2800
Human Microutro 2751 GCATAAGGACCTGGTCAACGTTCCACTCTGTGTTGATATGTGTCTCAATT 2800
Canine Microutr 2751 GCATAAGGATCTGGTCAACGTTCCACTCTGTGTGGATATGTGTCTCAACT 2800
                     *** ***** ******* ********** ** ************** *

Mouse Microutro 2801 GGCTGCTCAACGTATACGACACGGGCCGGACTGGAAAAATTCGGGTACAG 2850
Human Microutro 2801 GGTTGCTCAATGTCTATGACACGGGTCGAACTGGAAAAATTAGAGTGCAG 2850
Canine Microutr 2801 GGTTGCTCAATGTGTATGACACGGGTCGAACTGGAAAAATAAGAGTGCAG 2850
                     ** ******* ** ** ******** ** ***********  * ** ***

Mouse Microutro 2851 AGTCTGAAGATTGGATTGATGTCTCTCTCCAAAGGCCTCTTAGAAGAGAA 2900
Human Microutro 2851 AGTCTGAAGATTGGATTAATGTCTCTCTCCAAAGGTCTCTTGGAAGAAAA 2900
Canine Microutr 2851 AGTCTGAAGATTGGATTGATGTCTCTCTCCAAAGGTCTCTTAGAAGAAAA 2900
                     ***************** ***************** ***** ***** **

Mouse Microutro 2901 ATACAGATGTCTCTTTAAGGAGGTGGCAGGGCCAACTGAGATGTGTGACC 2950
Human Microutro 2901 ATACAGATATCTCTTTAAGGAAGTTGCGGGGCCGACAGAAATGTGTGACC 2950
Canine Microutr 2901 ATACAGATATCTCTTTAAGGAGGTGGCAGGTCCGACAGAAATGTGTGACC 2950
                     ******** ************ ** ** ** ** ** ** **********

Mouse Microutro 2951 AGCGGCAGCTTGGCCTGCTACTTCACGATGCCATCCAGATCCCTAGGCAG 3000
Human Microutro 2951 AGAGGCAGCTGGGCCTGTTACTTCATGATGCCATCCAGATCCCCCGGCAG 3000
Canine Microutr 2951 AGAGGCAGCTTGGCCTGTTACTTCATGATGCCATCCAGATCCCTCGGCAG 3000
                     ** ******* ****** ******* ****************  *****
```

FIG. 1M

```
Mouse Microutro 3001 CTGGGGGAAGTAGCAGCCTTTGGGGGCAGTAACATTGAGCCCAGTGTCCG 3050
Human Microutro 3001 CTAGGTGAAGTAGCAGCTTTTGGAGGCAGTAATATTGAGCCTAGTGTTCG 3050
Canine Microutr 3001 CTGGGGGAAGTAGCAGCTTTTGGGGGCAGTAATATTGAACCCAGTGTTCG 3050
                     ** ** ********** ***** ******** ***** ** ***** **

Mouse Microutro 3051 CAGCTGCTTCCAGCAGAATAACAACAAGCCAGAAATCAGTGTGAAGGAGT 3100
Human Microutro 3051 CAGCTGCTTCCAACAGAATAACAATAAACCAGAAATAAGTGTGAAAGAGT 3100
Canine Microutr 3051 CAGCTGCTTCCAACAGAATAACAATAAGCCAGAGATAAGCGTAAAAGATT 3100
                     ************ ********** ** ***** ** ** ** ** ** *

Mouse Microutro 3101 TTATAGACTGGATGCATTTGGAACCCCAGTCCATGGTGTGGTTGCCGGTT 3150
Human Microutro 3101 TTATAGATTGGATGCATTTGGAACCACAGTCCATGGTTTGGCTCCCAGTT 3150
Canine Microutr 3101 TTATAGATTGGATGCGTCTGGAACCACAGTCCATGGTTTGGCTGCCAGTT 3150
                     ******* ******* * ******* ********** *** * ** ***

Mouse Microutro 3151 CTGCATCGGGTCGCAGCTGCTGAGACTGCAAAACATCAGGCCAAATGCAA 3200
Human Microutro 3151 TTACATCGAGTGGCAGCAGCGGAGACTGCAAAACATCAGGCCAAATGCAA 3200
Canine Microutr 3151 TTACACCGAGTGGCTGCAGCTGAGACTGCAAAGCATCAAGCTAAATGCAA 3200
                      * ** ** ** ** ** ** ********** ***** ** ********

Mouse Microutro 3201 CATCTGCAAAGAATGCCCGATTGTTGGGTTCAGATACAGGAGCCTAAAGC 3250
Human Microutro 3201 CATCTGTAAAGAATGTCCAATTGTCGGGTTCAGGTATAGAAGCCTTAAGC 3250
Canine Microutr 3201 CATCTGTAAAGAATGTCCAATAGTTGGGTTCAGGTATAGAAGCCTAAAGC 3250
                     ****** ******** ** ** ** ******** ** ** ***** ****
```

FIG. 1N

```
Mouse Microutro 3251 ATTTTAATTATGATGTCTGCCAGAGTTGCTTCTTTTCTGGAAGAACAGCA 3300
Human Microutr 3251 ATTTTAACTATGATGTCTGCCAGAGTTGTTTCTTTTCGGGTCGAACAGCA 3300
Canine Microutr 3251 ATTTTAACTATGATGTCTGCCAGAGTTGCTTTTTTTCGGGTCGAACGGCA 3300
                     ******* ******************** ** ***** **  **** ***

Mouse Microutro 3301 AAGGGCCACAAGTTACATTACCCGATGGTAGAATACTGCATACCGACAAC 3350
Human Microutro 3301 AAAGGTCACAAATTACATTACCCAATGGTGGAATATTGTATACCTACAAC 3350
Canine Microutr 3301 AAAGGTCACAAATTACATTACCCAATGGTGGAATATTGTATACCTACAAC 3350
                     ** ** ***** ********** ***** ***** ** ***** *****

Mouse Microutro 3351 ATCTGGGGAAGATGTGAGAGATTTCACTAAGGTGCTGAAGAACAAGTTCA 3400
Human Microutro 3351 ATCTGGGGAAGATGTACGAGACTTCACAAAGGTACTTAAGAACAAGTTCA 3400
Canine Microutr 3351 ATCTGGGGAAGATGTACGAGACTTCACAAAGGTGCTGAAGAATAAGTTCA 3400
                     ***************  **** ***** ***** ** ***** *******

Mouse Microutro 3401 GGTCCAAGAAATATTTTGCCAAACATCCTCGGCTTGGCTACCTGCCTGTC 3450
Human Microutro 3401 GGTCGAAGAAGTACTTTGCCAAACACCCTCGACTTGGTTACCTGCCTGTC 3450
Canine Microutr 3401 GATCAAAGAAATACTTTGCCAAACATCCTCGGCTTGGCTACCTGCCTGTC 3450
                     * ** ***** ** ********** ***** ***** ************

Mouse Microutro 3451 CAGACCGTGCTGGAAGGGGACAACTTAGAAACTTGA 3486
Human Microutro 3451 CAGACAGTTCTTGAAGGTGACAACTTAGAGACTTGA 3486
Canine Microutr 3451 CAGACAGTACTTGAAGGTGACAACTTAGAGACTTGA 3486
                     ***** ** ** ***** ********** ******
```

FIG. 2A

```
Canine Microutr     1 MAKYGEHEASPDNGQNEFSDIIKSRSDEHNDVQKKTFTKWINARFSKSGK   50
Human Microutro     1 MAKYGEHEASPDNGQNEFSDIIKSRSDEHNDVQKKTFTKWINARFSKSGK   50
Mouse Microutro     1 MAKYGDLEARPDDGQNEFSDIIKSRSDEHNDVQKKTFTKWINARFSKSGK   50
                      ***** ** ** ************************************

Canine Microutr    51 PPINDMFTDLKDGRKLLDLLEGLTGTSLPKERGSTRVHALNNVNRVLQVL  100
Human Microutro    51 PPINDMFTDLKDGRKLLDLLEGLTGTSLPKERGSTRVHALNNVNRVLQVL  100
Mouse Microutro    51 PPISDMFSDLKDGRKLLDLLEGLTGTSLPKERGSTRVHALNNVNRVLQVL  100
                      *** *** ****************************************

Canine Microutr   101 HQNNVDLVNIGGTDIVDGNHKLTLGLLWSIILHWQVKDVMKDVMSDLQQT  150
Human Microutro   101 HQNNVELVNIGGTDIVDGNHKLTLGLLWSIILHWQVKDVMKDVMSDLQQT  150
Mouse Microutro   101 HQNNVDLVNIGGTDIVAGNPKLTLGLLWSIILHWQVKDVMKDIMSDLQQT  150
                      ***** ********** ** ********************* *******

Canine Microutr   151 NSEKILLSWVRQSTRPYSQVNVLNFTTSWTDGLAFNAVLHRHKPDLFSWD  200
Human Microutro   151 NSEKILLSWVRQTTRPYSQVNVLNFTTSWTDGLAFNAVLHRHKPDLFSWD  200
Mouse Microutro   151 NSEKILLSWVRQTTRPYSQVNVLNFTTSWTDGLAFNAVLHRHKPDLFDWD  200
                      ************ ********************************** **

Canine Microutr   201 RVVKMSPIERLEHAFSKAQTYLGIEKLLDPEDVAVQLPDKKSIIMYLTSL  250
Human Microutro   201 KVVKMSPIERLEHAFSKAQTYLGIEKLLDPEDVAVRLPDKKSIIMYLTSL  250
Mouse Microutro   201 EMVKMSPIERLDHAFDKAHTSLGIEKLLSPETVAVHLPDKKSIIMYLTSL  250
                       ********* *** ** * ******* ** *** **************
```

FIG. 2B

```
Canine Microutr  251 FEVLPQQVTLDAIREVETLPRKYKKECEEGEISIQSSAPEEEHECPGAET  300
Human Microutro  251 FEVLPQQVTIDAIREVETLPRKYKKECEEEAINIQSTAPEEEHESPRAET  300
Mouse Microutro  251 FEVLPQQVTIDAIREVETLPRKYKKECEEEEIHIQSAVLAEEGQSPRAET  300
                     ********.******************  * ***.   ** ..* ***

Canine Microutr  301 PSTVTEVDTDLDSYQIALEEVLTWLLSAEDTFQEQDDISDDVEEVKEQFT  350
Human Microutro  301 PSTVTEVDMDLDSYQIALEEVLTWLLSAEDTFQEQDDISDDVEEVKDQFA  350
Mouse Microutro  301 PSTVTEVDMDLDSYQIALEEVLTWLLSAEDTFQEQHDISDDVEEVKEQFA  350
                     ******** ************************** **********.**.

Canine Microutr  351 THEAFMMELTAHQSSVGSVLQAGNQLITQGTLSDEEEFEIQEQMTLLNAR  400
Human Microutro  351 THEAFMMELTAHQSSVGSVLQAGNQLITQGTLSDEEEFEIQEQMTLLNAR  400
Mouse Microutro  351 THETFMMELTAHQSSVGSVLQAGNQLMTQGTLSREEEFEIQEQMTLLNAR  400
                     ***.**********************.****** ***************

Canine Microutr  401 WEALRVDSMNRQSRLHDVLMELQKKQLQQLSAWLTLTEERIQKMETCPLD  450
Human Microutro  401 WEALRVESMDRQSRLHDVLMELQKKQLQQLSAWLTLTEERIQKMETCPLD  450
Mouse Microutro  401 WEALRVESMERQSRLHDALMELQKKQLQQLSSWLALTEERIQKMESLPLG  450
                     ******.** ******* *************.**.**********. **

Canine Microutr  451 DDLKSLQKLLEDHKRLQNDLEAEQVKVNSLTHMVVIVDENSGESATAVLE  500
Human Microutro  451 DDVKSLQKLLEEHKSLQSDLEAEQVKVNSLTHMVVIVDENSGESATAILE  500
Mouse Microutro  451 DDLPSLQKLLQEHKSLQNDLEAEQVKVNSLTHMVVIVDENSGESATALLE  500
                     **. ******..** ** ****************************.**

Canine Microutr  501 DQLQKLGERWTAVCRWTEERWSRLQEINILWQELLEEQCLLKAWLTEKEE  550
Human Microutro  501 DQLQKLGERWTAVCRWTEERWNRLQEINILWQELLEEQCLLKAWLTEKEE  550
Mouse Microutro  501 DQLQKLGERWTAVCRWTEERWNRLQEISILWQELLEEQCLLEAWLTEKEE  550
                     ********************* ***** ************ ********
```

FIG. 2C

```
Canine Microutr  551 ALNKVQTSNFKDQKELSVSIRRLAILKEDMEMKRQALDQLSEIGQDVGQL  600
Human Microutro  551 ALNKVQTSNFKDQKELSVSVRRLAILKEDMEMKRQTLDQLSEIGQDVGQL  600
Mouse Microutro  551 ALDKVQTSNFKDQKELSVSVRRLAILKEDMEMKRQTLDQLSEIGQDVGQL  600
                     ** ***************.**************.**************

Canine Microutr  601 VDNPKASKKINSDSEELTQRWDSLVQRLEDSSSQVTQAVAKLGMSQIPQK  650
Human Microutro  601 LDNSKASKKINSDSEELTQRWDSLVQRLEDSSNQVTQAVAKLGMSQIPQK  650
Mouse Microutro  601 LSNPKASKKMNSDSEELTQRWDSLVQRLEDSSNQVTQAVAKLGMSQIPQK  650
                      . * *****.********************** ****************

Canine Microutr  651 DLLETVRIREQVTTKRSKQELPPPPPPKKRQIPVDLEKLRDLQGAMDDLD  700
Human Microutro  651 DLLETVRVREQAITKKSKQELPPPPPPKKRQIHVDLEKLRDLQGAMDDLD  700
Mouse Microutro  651 DLLETVHVREQGMVKKPKQELPPPPPPKKRQIHVDLEKLRDLQGAMDDLD  700
                     ******..***   *. ************** ****************

Canine Microutr  701 VDMKEAEAVRNGWKPVGDLLIDSLQDHIEKTMAFREEIAPINLKVKTVND  750
Human Microutro  701 ADMKEAESVRNGWKPVGDLLIDSLQDHIEKIMAFREEIAPINFKVKTVND  750
Mouse Microutro  701 ADMKEVEAVRNGWKPVGDLLIDSLQDHIEKTLAFREEIAPINLKVKTMND  750
                      **** *.********************** .********** **** .**

Canine Microutr  751 LSSQLSPLDLHPSLKMSRQLDDLNMRWKLLQVSVDDRLKQLQEAHRDFGP  800
Human Microutro  751 LSSQLSPLDLHPSLKMSRQLDDLNMRWKLLQVSVDDRLKQLQEAHRDFGP  800
Mouse Microutro  751 LSSQLSPLDLHPSLKMSRQLDDLNMRWKLLQVSVDDRLKQLQEAHRDFGP  800
                     **************************************************
```

FIG. 2D

```
Canine Microutr  801 SSQHFLSTSVQLPWQRSISHNKVPYYINHQTQTTCWDRPKMTELFQSLAD  850
Human Microutro  801 SSQHFLSTSVQLPWQRSISHNKVPYYINHQTQTTCWDHPKMTELFQSLAD  850
Mouse Microutro  801 SSQHFLSTSVQLPWQRSISHNKVPYYINHQTQTTCWDHPKMTELFQSLAD  850
                     ************************************.************

Canine Microutr  851 LNNVRFSAYRTAIKIRRLQKALCLDLLELNTTNEVFKQHKLNQNDQLLSV  900
Human Microutro  851 LNNVRFSAYRTAIKIRRLQKALCLDLLELSTTNEIFKQHKLNQNDQLLSV  900
Mouse Microutro  851 LNNVRFSAYRTAIKIRRLQKALCLDLLELNTTNEVFKQHKLNQNDQLLSV  900
                     ***************************** ****.**************

Canine Microutr  901 PDVINCLTTTYDGLEQMHKDLVNVPLCVDMCLNWLLNVYDTGRTGKIRVQ  950
Human Microutro  901 PDVINCLTTTYDGLEQMHKDLVNVPLCVDMCLNWLLNVYDTGRTGKIRVQ  950
Mouse Microutro  901 PDVINCLTTTYDGLEQLHKDLVNVPLCVDMCLNWLLNVYDTGRTGKIRVQ  950

Canine Microutr  951 SLKIGLMSLSKGLLEEKYRYLFKEVAGPTEMCDQRQLGLLLHDAIQIPRQ 1000
Human Microutro  951 SLKIGLMSLSKGLLEEKYRYLFKEVAGPTEMCDQRQLGLLLHDAIQIPRQ 1000
Mouse Microutro  951 SLKIGLMSLSKGLLEEKYRCLFKEVAGPTEMCDQRQLGLLLHDAIQIPRQ 1000
                     ****************** ****************************

Canine Microutr 1001 LGEVAAFGGSNIEPSVRSCFQQNNNKPEISVKDFIDWMRLEPQSMVWLPV 1050
Human Microutro 1001 LGEVAAFGGSNIEPSVRSCFQQNNNKPEISVKEFIDWMHLEPQSMVWLPV 1050
Mouse Microutro 1001 LGEVAAFGGSNIEPSVRSCFQQNNNKPEISVKEFIDWMHLEPQSMVWLPV 1050
                     ********************************.*****.***********

Canine Microutr 1051 LHRVAAAETAKHQAKCNICKECPIVGFRYRSLKHFNYDVCQSCFFSGRTA 1100
Human Microutro 1051 LHRVAAAETAKHQAKCNICKECPIVGFRYRSLKHFNYDVCQSCFFSGRTA 1100
Mouse Microutro 1051 LHRVAAAETAKHQAKCNICKECPIVGFRYRSLKHFNYDVCQSCFFSGRTA 1100
                     ************************************************
```

FIG. 2E

```
Canine Microutr 1101 KGHKLHYPMVEYCIPTTSGEDVRDFTKVLKNKFRSKKYFAKHPRLGYLPV 1150
Human Microutro 1101 KGHKLHYPMVEYCIPTTSGEDVRDFTKVLKNKFRSKKYFAKHPRLGYLPV 1150
Mouse Microutro 1101 KGHKLHYPMVEYCIPTTSGEDVRDFTKVLKNKFRSKKYFAKHPRLGYLPV 1150
                     **************************************************

Canine Microutr 1151 QTVLEGDNLETN 1162
Human Microutro 1151 QTVLEGDNLETN 1162
Mouse Microutro 1151 QTVLEGDNLETN 1162
                     ************
```

Formatted Alignments

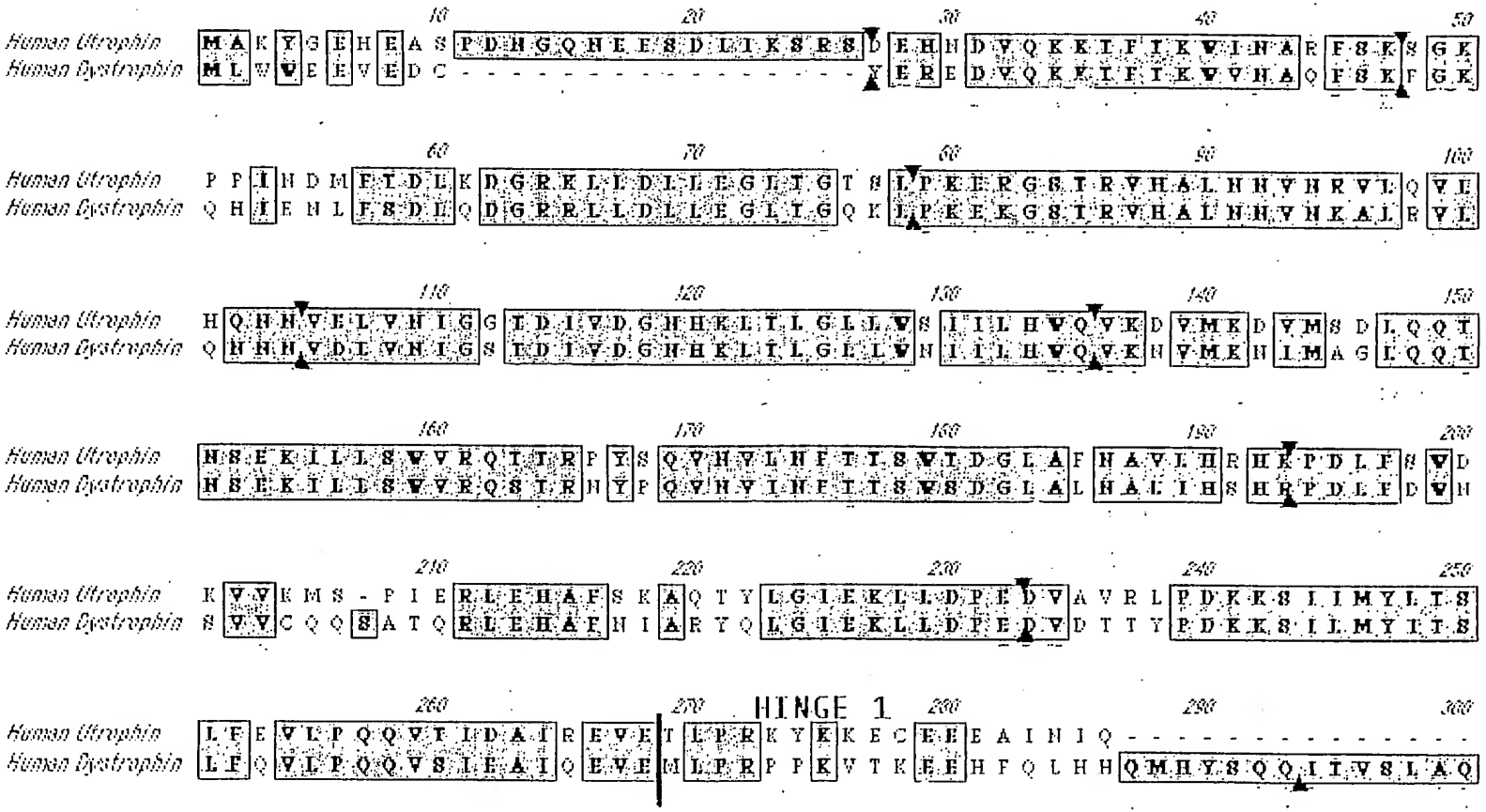

Fig 3A

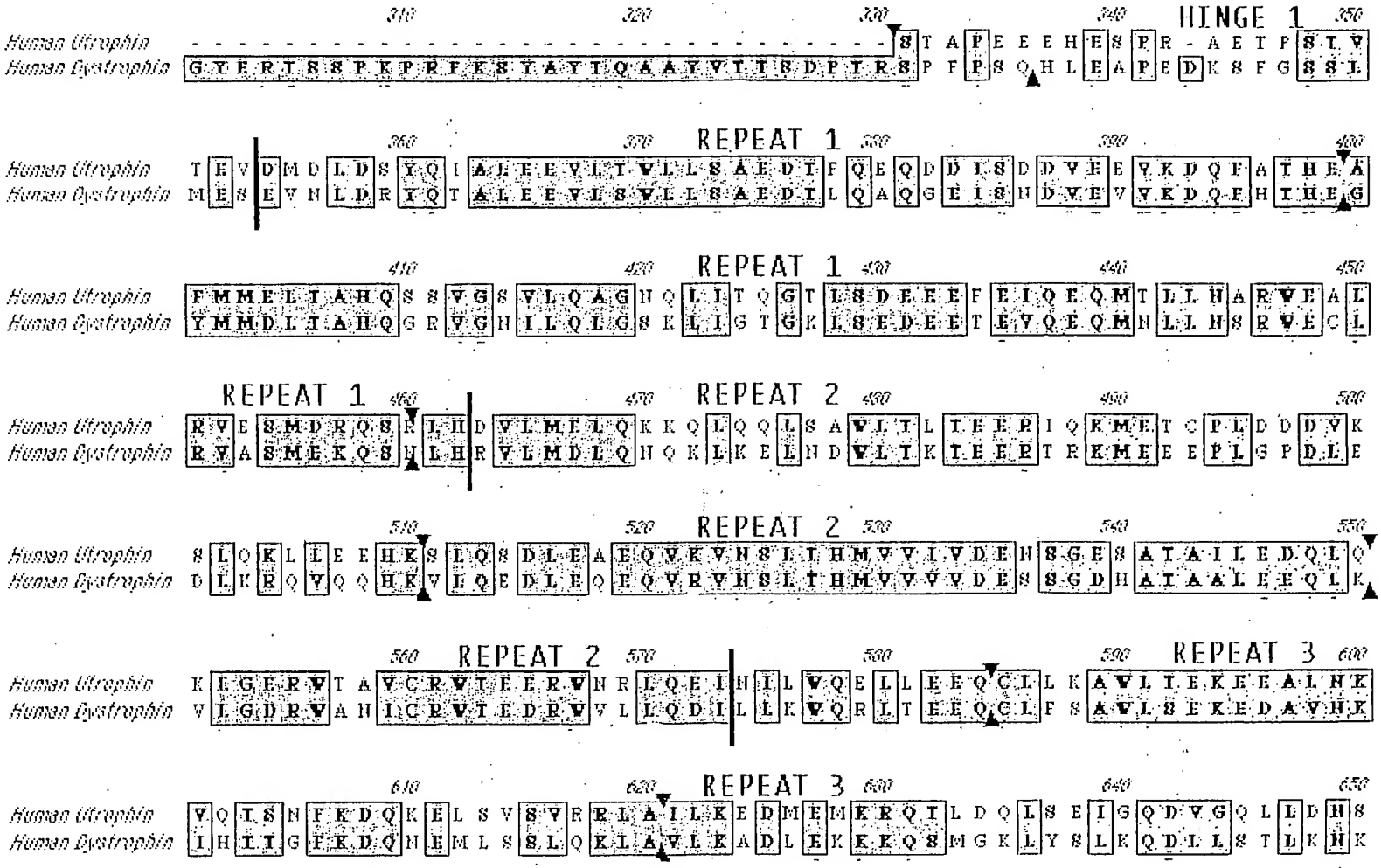
HINGE 1
REPEAT 1
REPEAT 1
REPEAT 1
REPEAT 2
REPEAT 2
REPEAT 2
REPEAT 3
REPEAT 3
Human Utrophin
Human Dystrophin

FIG 3B


REPEAT 3
HINGE 2
REPEAT 4
REPEAT 4
REPEAT 5
Human Utrophin
Human Dystrophin

FIG3C


1010
1020
1030
1040
1050
Human Utrophin
Human Dystrophin
1060
1070
1080
1090
1100
Human Utrophin
Human Dystrophin
1110
1120
1130
1140
1150
Human Utrophin
Human Dystrophin
1160
1170
1180
1190
1200
Human Utrophin
Human Dystrophin
1210
1220
1230
1240
1250
Human Utrophin
Human Dystrophin
1260
1270
1280
1290
1300
Human Utrophin
Human Dystrophin
1310
1320
1330
1340
1350
Human Utrophin
Human Dystrophin

FIG3D


1360
1370
1380
1390
1400
Human Utrophin
Human Dystrophin
1410
1420
1430
1440
1450
Human Utrophin
Human Dystrophin
1460
1470
1480
1490
1500
Human Utrophin
Human Dystrophin
1510
1520
1530
1540
1550
Human Utrophin
Human Dystrophin
1560
1570
1580
1590
1600
Human Utrophin
Human Dystrophin
1610
1620
1630
1640
1650
Human Utrophin
Human Dystrophin
1660
1670
1680
1690
1700
Human Utrophin
Human Dystrophin

FIG 3E

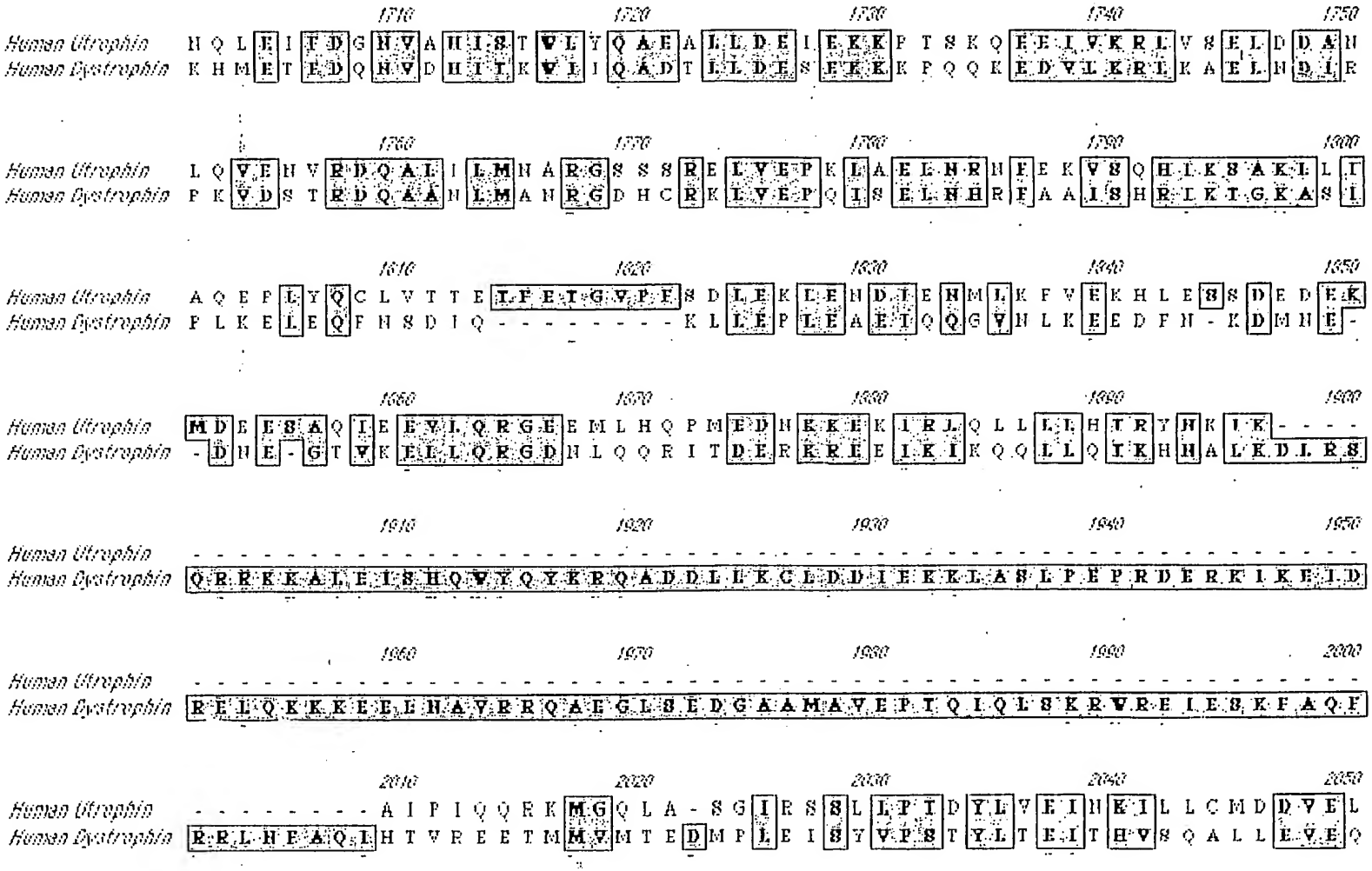
1710 1720 1730 1740 1750
Human Utrophin H Q L E I T D G H V A H I S T V L Y Q A E A L L D E I E K K P T S K Q E E I V K R L V S E L D D A H
Human Dystrophin K H M E T E D Q H V D H I T K V I I Q A D T L L D E S E K K P Q Q K E D V L K R L K A E L N D I R
1760 1770 1780 1790 1800
Human Utrophin L Q V E H V R D Q A L I L M H A R G S S S R E L Y E P K L A E E H R H F E K V S Q H L K S A K I L I
Human Dystrophin P K V D S T R D Q A A H L M A H R G D H C R K L V E P Q I S E L N H R F A A I S H R L K T G K A S I
1810 1820 1830 1840 1850
Human Utrophin A Q E F L Y Q C L V T T E I F E I G V P E S D L E K L E H D I E H M L K F V E K H L E S S D E D E K
Human Dystrophin P L K E L E Q F H S D I Q - - - - - - - - - K L L E P L E A E I Q Q G V H L K E E D F H - K D M H E -
1860 1870 1880 1890 1900
Human Utrophin M D E E S A Q I E E V L Q R G E E M L H Q P M E D H E K E K I R L Q L L L E H T R Y H K I K - - - -
Human Dystrophin - D H E - G T V K E L L Q R G D H L Q Q R I T D E R K R E E I K I K Q Q L L Q I K H H A L K D L R S
1910 1920 1930 1940 1950
Human Utrophin -
Human Dystrophin Q R R K K A L E I S H Q V Y Q Y K R Q A D D L E K C L D D I E K K L A S L P E P R D E R K I K E I D
1960 1970 1980 1990 2000
Human Utrophin -
Human Dystrophin R E L Q K K K E E L H A V R R Q A E G L S E D G A A M A V E P T Q I Q L S K R W R E I E S K F A Q F
2010 2020 2030 2040 2050
Human Utrophin - - - - - - - - A I P I Q Q E K M G Q L A - S G I E S S L L P T D Y L V E I H K I L L C M D D V E L
Human Dystrophin R R L H E A Q I H T V R E E T M M V M T E D M P L E I S Y V P S T Y L T E I T H V S Q A L L E V E Q

FIG 3F

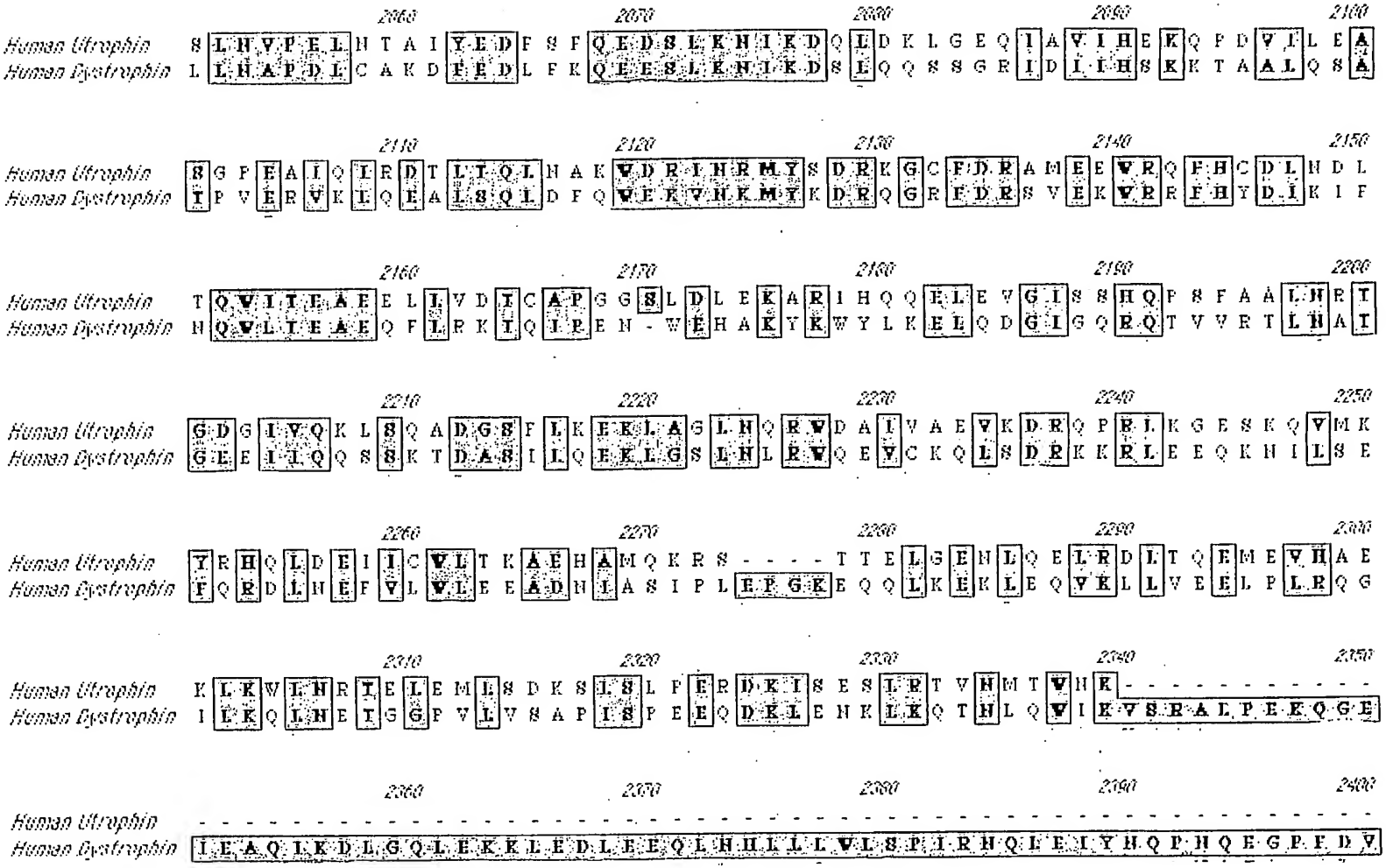
2060
2070
2080
2090
2100
Human Utrophin S L H V P E L H T A I Y E D F S F Q E D S L K H I K D Q L D K L G E Q I A V I H E K Q P D V I L E A
Human Dystrophin L L H A P D L C A K D F E D L F K Q E E S L K N I K D S L Q Q S S G R I D I I H S K K T A A L Q S A
2110
2120
2130
2140
2150
Human Utrophin S G P E A I Q L R D T L I Q L N A K V D R I H R M Y S D R K G C F D R A M E E V R Q F H C D L H D L
Human Dystrophin I P V E R V K L Q E A L S Q L D F Q V E K V H K M Y K D R Q G R F D R S V E K V R R F H Y D I K I F
2160
2170
2180
2190
2200
Human Utrophin T Q V I I E A E E L L V D I C A P G G S L D L E K A R I H Q Q E L E V G I S S H Q P S F A A L H R T
Human Dystrophin H Q V L I E A E Q F L R K T Q I P E N - W E H A K Y K W Y L K E L Q D G I G Q R Q T V V R T L H A I
2210
2220
2230
2240
2250
Human Utrophin G D G I V Q K L S Q A D G S F L K E E L A G L H Q R V D A I V A E V K D R Q P R I K G E S E K Q V M K
Human Dystrophin G E E I I Q Q S S K T D A S I L Q E K L G S L H L R V Q E V C K Q L S D R K K R L E E Q K H I L S E
2260
2270
2280
2290
2300
Human Utrophin Y R H Q L D E I I C V L T K A E H A M Q K R S - - - - T T E L G E H L Q E L R D L T Q E M E V H A E
Human Dystrophin F Q R D L H E F V L V L E E A D H I A S I P L E P G K E Q Q L K E K L E Q V K L L V E E L P L R Q G
2310
2320
2330
2340
2350
Human Utrophin K L K W L H R T E L E M L S D K S I S L F E R D K I S E S L R T V H M T V H K - - - - - - - - - - -
Human Dystrophin I L K Q L H E I G G P V L V S A P I S P E E Q D K L E N K L K Q T H L Q V I K V S R A L P E E Q G E
2360
2370
2380
2390
2400
Human Utrophin -
Human Dystrophin I E A Q L K D L G Q L E K K L E D L E E Q L H H L K L V L S P I R H Q I E I Y H Q P H Q E G P F D V

FIG 3G

2410
2420
2430
2440
2450
Human Ubiquitin
Human Cyclophilin
2460
2470
2480
2490
2500
Human Ubiquitin
Human Cyclophilin
2510
2520
2530
2540
2550
Human Ubiquitin
Human Cyclophilin
2560
2570
2580
2590
2600
Human Ubiquitin
Human Cyclophilin
2610
2620
2630
2640
2650
Human Ubiquitin
Human Cyclophilin
2660
2670
2680
2690
2700
Human Ubiquitin
Human Cyclophilin
2710
2720
2730
2740
2750
Human Ubiquitin
Human Cyclophilin

FIG 3H

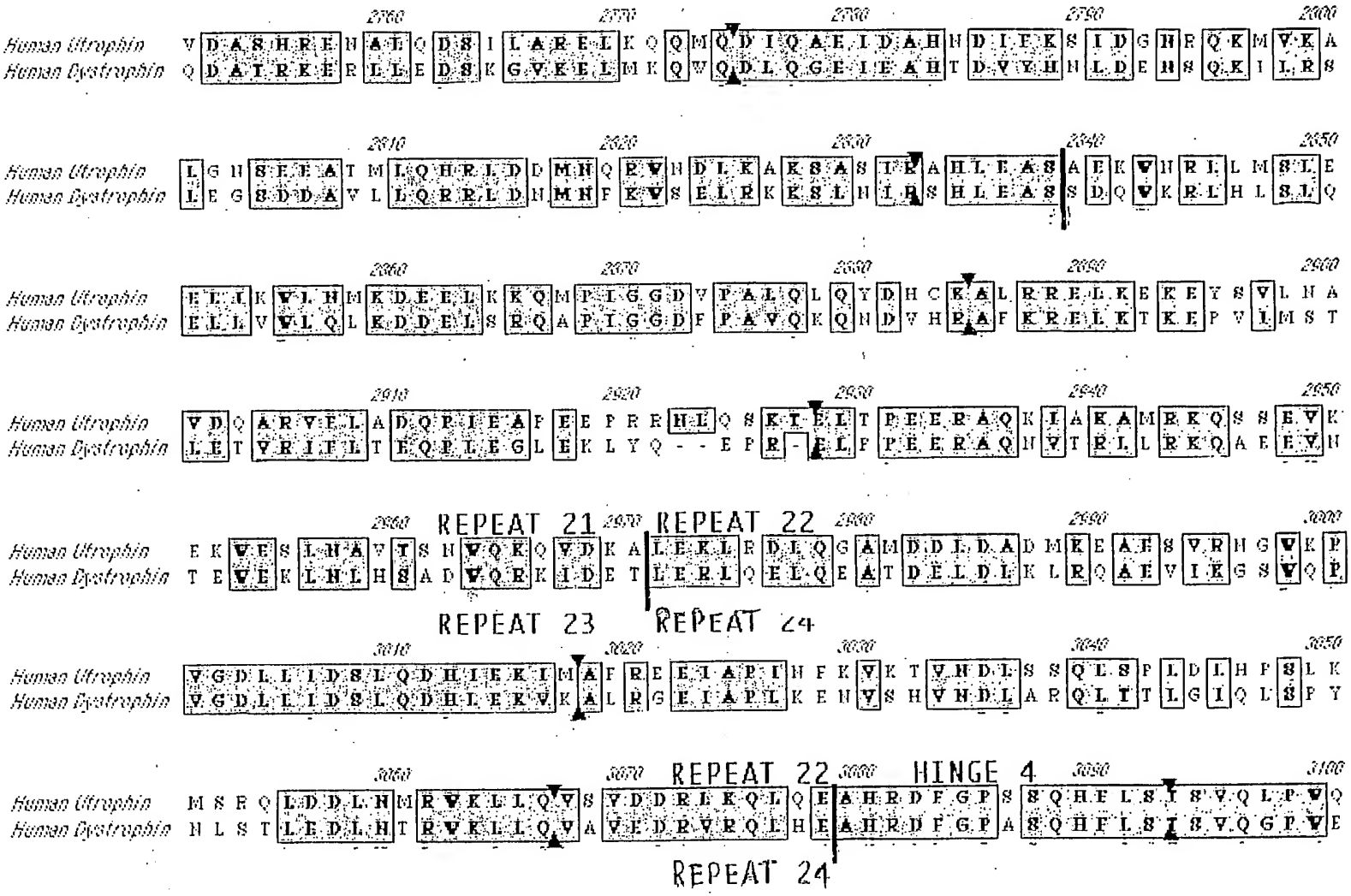
Human Utrophin
Human Dystrophin
REPEAT 21
REPEAT 22
REPEAT 23
REPEAT 24
HINGE 4

FIG 3I

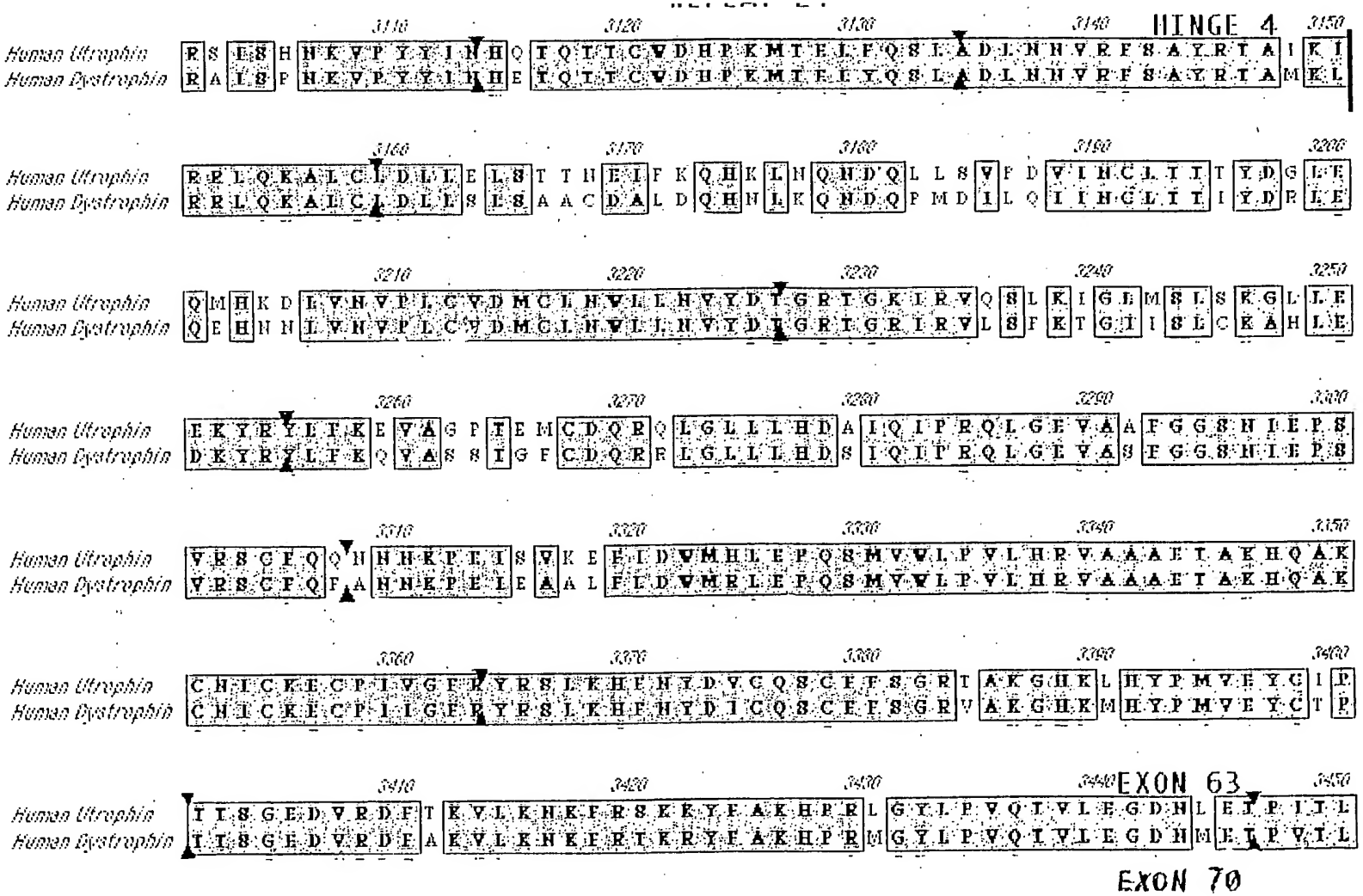

FIG 3K

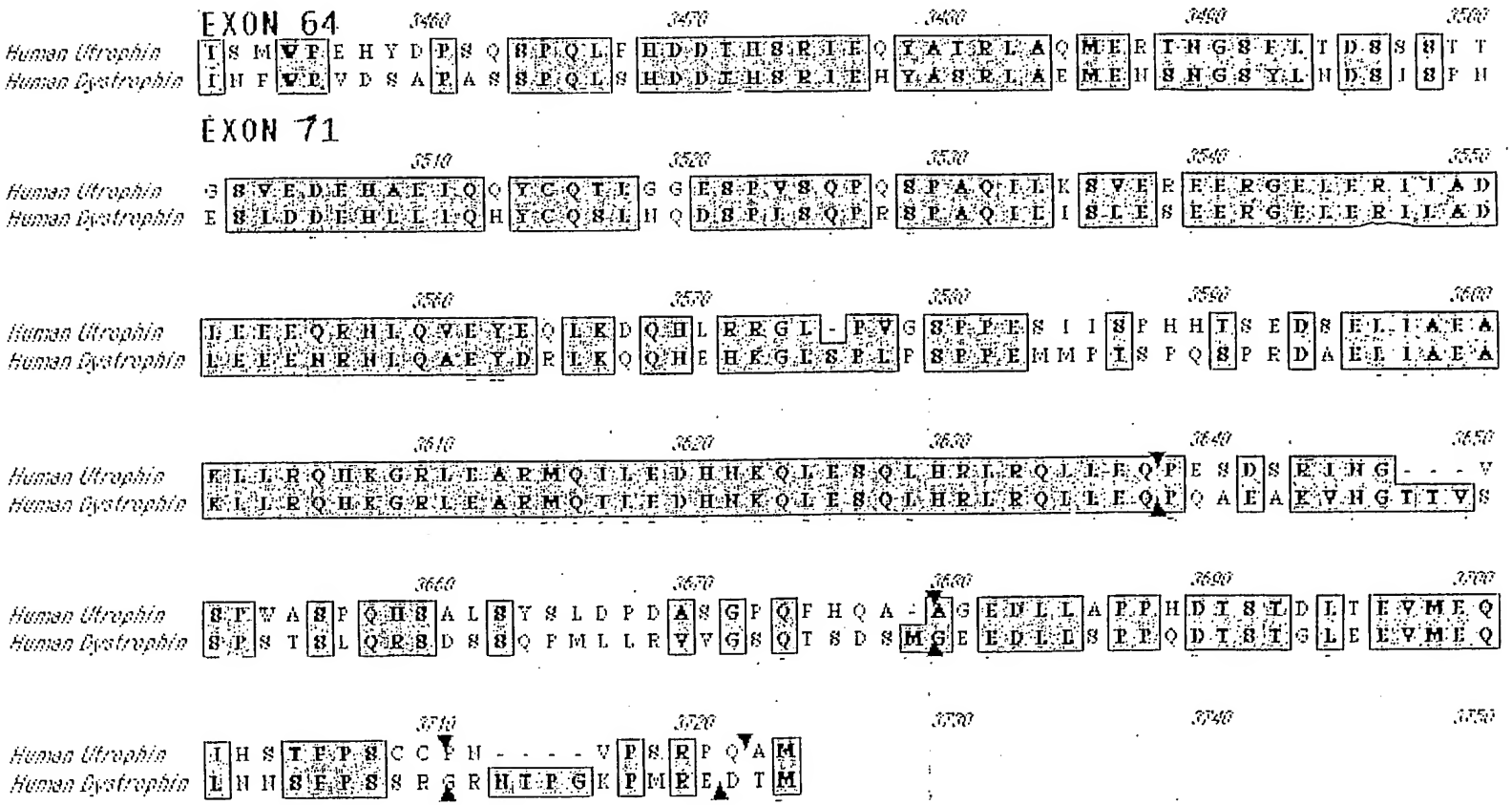

FIG 3k